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QUALITY GUIDES *in* BUYING HOUSEHOLD BLANKETS

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Warmth and durability without too much weight are the qualities a practical woman desires most in the blankets she buys. She is looking for those that will keep out cold drafts and are strong enough to hold together in laundering and to resist wear by rubbing. At the same time, they must not be so heavy that they are uncomfortable as a bed covering, nor so expensively made that the average consumer cannot afford them.

Heat transmission, air permeability, tensile strength, thread count, weight, and resistance to abrasion are terms the textile experts use to describe these properties. Machines for measuring all of them are found in most mills and textile-testing laboratories.

When the Federal Government and many other large agencies buy blankets they write up detailed descriptions, or specifications. The seller furnishes samples for testing, and before the blankets are purchased the results of these laboratory analyses must show that the merchandise comes up to the requirements set by the specifications. If consumers had this kind of definite information on the labels of all blankets sold on the retail market, much of the guesswork would disappear from blanket buying. The purchaser could then compare accurately different blankets in regard to warmth, weight, and service to be expected.

Recently a test was made by the Bureau of Home Economics of 22 household blankets, representative of the various kinds sold in the retail stores and by mail-order houses. The results (p. 7 to 8) emphasize the need for stating the properties of each blanket clearly on the label. As yet definite information is rarely, if ever, available to the homemaker. Until it is, the following general guides may help her to avoid the most inferior products and choose instead blankets of good quality that will prove satisfactory in warmth, durability, and weight.

PROPERTIES OF A GOOD BLANKET

WARMTH

Warmth is the chief quality of a good bed blanket and depends upon the ability of the fabric to act as an insulator. The still air enmeshed in the cloth protects the person from cold drafts and keeps the heat generated by the body from escaping too rapidly for comfort. The kind of fiber, the nap, and the closeness of weave all contribute to warmth.

Kind of fiber

Most household blankets are made entirely of wool or cotton or a combination of the two. In practically all the mixed blankets the warp is cotton, though a few with silk warp have appeared recently on the market.

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The filling of most blankets is either all wool or wool and cotton combined. Most authorities agree that 25 percent of wool is necessary to make an appreciable difference in warmth and to give the characteristic properties of wool, such as fluffiness, elasticity of nap, and ability to absorb moisture without making the blanket itself feel damp.

Late in 1932 a group of blanket manufacturers agreed to certain rules for labeling all-wool and part-wool blankets. These rules were issued by the National Bureau of Standards, of the United States Department of Commerce, as so-called "Commercial Standards" and became effective August 15, 1933. Under this agreement blankets must contain at least 5 percent of wool before the word "wool" can be used on the label. Those having less than this amount cannot be labeled "Part wool." Manufacturers accepting this trade practice further agreed that blankets containing 5 to 25 percent of wool shall be labeled "Part wool, not less than 5 percent", and those having more than 25 percent of wool shall be labeled with the guaranteed (minimum) wool content given in percentage. Blankets containing more than 98 percent of wool shall be labeled "All wool." All these percentages refer to the wool content of the entire blanket and not to the amount of wool in the filling alone. Although the manufacturer may agree to the standards, labeling is not at all compulsory. He may make several qualities of blankets and label some without labeling others, or he may label all or none. The plan simply means that if he does label his blankets he shall designate the amount of wool they contain in accordance with the rules set up.

Cotton and wool blankets containing 80 to 85 percent of wool usually have an all-wool filling. When the wool content is between 5 and 80 percent the two kinds of fibers may be blended before the filling yarns are spun. Another way to combine wool and cotton for the filling, particularly in blankets having 5 to 25 percent of wool, is to use a so-called core yarn. This has a small cotton yarn in the center to increase strength. The wool is wrapped around the cotton core in such a manner as to put all of it on the outside where it can go into the nap and make for greater warmth.

Certain characteristics of the fibers themselves influence the warmth of the blanket. The crimp and the scaly surface of wool permit it to enmesh air in the cloth. Also wool is naturally elastic. This prevents the fibers in a wool blanket from packing, and if properly laundered, enables it to keep much of its original fluffiness. On the other hand, cotton fibers are straight, smooth, nonresilient, and shorter than wool. Therefore, laundering or weighting down a cotton blanket with other bed covers squeezes out the air and reduces its warmth. Because cotton lacks the elasticity of wool it cannot spring back to its original condition readily or completely. After washing, a cotton blanket has to be renapped to restore its fluffiness and air-retaining ability.

When buying blankets for warmth, look for those with the highest percentage of good-quality wool within the price range you desire. Be sure to read carefully the label on blankets of mixed fibers and learn how much of each fiber has been used. The percentage of wool is some indication of the warmth of a blanket.

Napping

Napping increases the number of air pockets in a blanket fabric. It is a finishing process that pulls to the surface the loose ends of fibers from the soft, loosely twisted filling yarns in the foundation cloth. Briefly the method is this: After the foundation cloth is woven, it goes through a napping machine in which rollers covered with tiny wire claws revolve in one direction while the cloth travels in the opposite. The claws catch in the filling yarns and gently lift the free ends of the fibers. Sometimes the hook-covered burs of the teasel plant are used instead of the wire claws. The nap raised may be very thick or so thin that only the surface fibers are rubbed up. Naturally the more the fabric is napped, the weaker the filling yarns become. Also the weave becomes less distinct. That is why the weave of a napped blanket looks blurred when you hold it up to the light.

While napping makes a blanket a better insulator in one respect, it may also lower its power to resist wind or, in other words, may increase its air permeability. However, household blankets are generally used indoors and with sheets and comfortables which help to hold still air around the body. For this reason they can be more loosely woven and heavily napped than blankets that are used out of doors and without other covers.

Weave

Hold the blanket up to the light to examine the closeness and evenness of the weave. If the cloth seems sleazy and thin in places it is probably too loosely and openly woven to be very warm. At the same time notice also the kind of weave. Most household blankets have either a simple twill weave or some modification of it, because a twill throws more filling to the surface than does a plain weave. Most of the reversible blankets have a modified twill weave which gives a great deal of filling on each side. Because there are more yarns to be napped this permits a thick blanket without so much injury to the foundation cloth.

DURABILITY

Durability comes next to warmth when selecting a blanket. It depends upon the quality of the fiber used in the yarns, the amount of napping, and to some extent upon its original size as well as on the way the blanket is washed.

The blanket fabric

If long, strong fibers are used in the foundation fabric of a blanket, the napping process merely pulls up the ends of the fiber while the rest remain anchored in the yarn. But if the fibers are very short and weak, the chances are that they are pulled entirely out of the yarn or broken so that they are merely caught in the nap. These loose fibers soon lose their grip and roll up in little balls of lint that shake off when the blanket is used. The sleazy foundation that remains is weak and has scanty nap.

When buying blankets you can get some idea of the durability of the nap by pulling gently on it. Does it hold firmly in the fabric, or does it come out easily? Also rub the surface of the blanket briskly with the palm of your hand. Does the nap fuzz up and rub off readily? If not, you may safely conclude that fibers of good length were used in the yarns and that napping had little, if any, injurious effect upon them. But if much lint comes off you may be sure that short fibers were used in the first place or else long ones were broken during napping, and in that case the blanket will soon lose its warmth.

Hold the blanket up to the light to examine the weave as well as to see whether the nap is distributed uniformly over the entire surface. There should be no thick or thin spots. At the same time compare the closeness of the yarns and their regularity in size. Smooth, even yarns, regularly spaced indicate better quality than yarns that are uneven, lumpy, and irregularly woven.

Unfortunately, there is no satisfactory test the consumer can apply to blankets in the store to estimate their strength. So until the label gives definite facts on durability, this important property must be judged solely by appearance and feel—both inaccurate guides. If the blankets are of adequate length, however, they wear better. When a blanket is too short the sleeper pulls and stretches it to make it come up over his shoulders and neck. Unless a blanket is long enough, if it is tucked in securely at the foot of the bed, the strain put on the yarns weakens them and in time causes holes.

In textile laboratories the durability of blankets is judged by their resistance to rubbing and by their breaking strength. The blanket is rubbed with an abrasive material and then calculations are made to determine the loss in weight due to wearing away the nap and the loss in breaking strength of the filling yarns.

Two methods—the grab and strip—are used to determine the breaking or tensile strength. For the grab method the samples of cloth are cut 4 inches wide and 6 inches long, but only a section 1 inch wide through the center is broken. In the strip method, the pieces of cloth are only 1 inch wide. The grab method, generally used in commercial testing and in some laboratories, gives higher values than does the strip method. This is due to the support given by the extra yarns on either side of the 1-inch section.

In practically no blanket of sufficient length need concern be felt over the durability of the warp yarns. During weaving they are stretched tautly in the loom and subjected to the wear of inserting the filling. They have to be strong to withstand this wear; otherwise they would break and cause trouble in the loom. Even thought the warp yarns are smaller than the filling (fig. 1), they are more tightly twisted, and in the finished blanket they are nearly always the stronger.

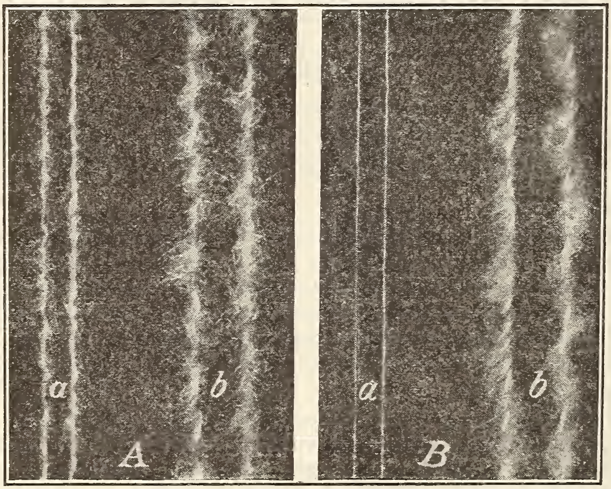

Figure 1.—Warp (*a*) and filling (*b*) yarns: *A*, both yarns of all-wool blanket; *B*, cotton warp and core yarn filling in a part-wool blanket.

The filling has less wear on it during weaving so that it is possible to use weaker yarns. In order to permit heavy napping with the least damage to the cloth the filling yarns in many cases are so soft and loosely twisted that they pull apart especially during washing. The wool takes up so much water that the added weight puts more strain on the filling than it can stand unless the blanket is handled very carefully.

Oftentimes blankets are damaged when they are washed. Warm, soft water, mild soap, the least possible handling, and no sudden changes in temperature are essential for good results when washing wool blankets. Hot water suddenly changed to cool, strong soaps, and rubbing cause the scales on the surface of wool fibers to lock into each other. This is called felting and always results in shrinkage. Attempts to restore the blanket to its original size and shape break the fibers into short pieces so that they soon work out of the yarns. Also the scales are stripped off and the power of the fibres to hold in air is destroyed. Besides making the blanket less durable it is no longer so warm as it was when new.

End finishes and bindings

Blanket bindings (fig. 2, *C*, and *D*) of silk and rayon in a satin weave or of cotton sateen are the most common nowadays, although some of the lightweight cotton blankets have a lock-stitch edge that wears well if the ends of the thread are securely fastened. Sateen is durable but usually fades some in washing. Silk or rayon bindings often wear out more quickly and have to be replaced sooner than the cotton, but generally hold their color, catch the soil less easily, and match the blanket fabric more closely than the cotton bindings. Since both edges of sateen bindings are raw, there should be at least two rows of stitching on bindings of this kind, one very close to the edge to prevent raveling and the other farther back to hold the binding securely in place.

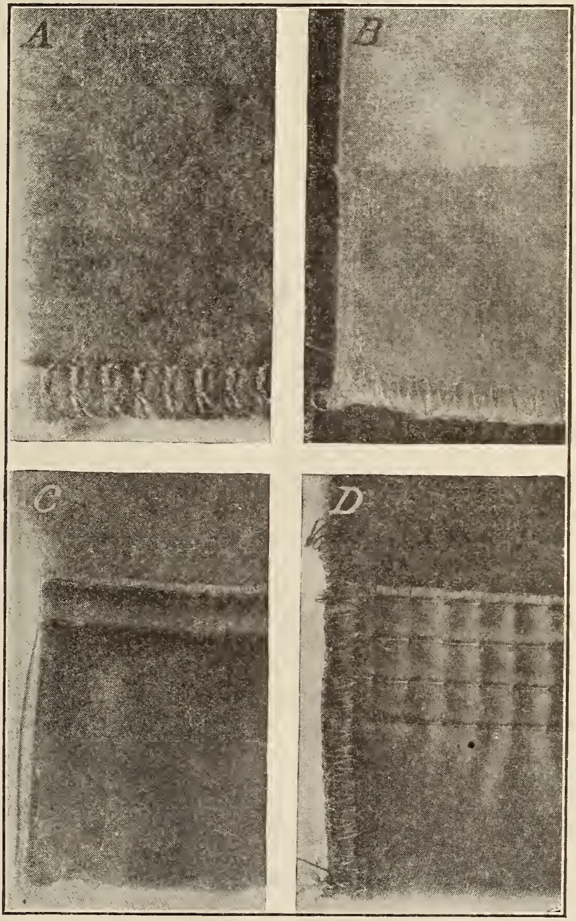

Figure 2.—Types of end finishes: *A* and *B*, blanket stitch; *C*, sateen binding; *D*, silk-satin binding.

Examine the way in which the ends of the binding are finished. On the better quality blankets the binding is boxed at the corner; that is, folded back an inch or more at the end (fig. 2, *C*). This makes a very neat finish which wears well. Sateen bindings also are often finished in this way or are cut off flush with the side of the blanket, leaving a raw edge that is covered with an overlocking stitch (fig. 2, *D*). Although it never looks so neat as the boxed corner, this finish may wear satisfactorily if the ends of the thread are well-fastened. Pull gently on the threads to see that the stitching does not unravel.

WEIGHT

The finished weight of a blanket is sometimes designated on the label. This is helpful if you are comparing blankets of exactly the same size and fiber content. However, a much better method would be to state the number of ounces that a square yard of the blanket weighs. Then blankets of different widths and lengths could be judged on the same basis, and you could more easily choose the one suited to your needs. Until such a plan is put into practice, the following figures calculated by weighing and measuring a number of blankets may serve as a rough guide. They are not, however, to be considered as standard weights.

For a blanket 72 by 84 inches:

Total weight:	*Ounces per square yard*
4½ pounds	15
3½ pounds	12½
3 pounds	10½

In comparing weights, be sure that the blankets are of the same material as well as of the same size. For example, if two all-wool blankets alike in size and price are different in weight, naturally the heavier one will give you more wool for the money. If one of the blankets contains some fiber besides wool, then you cannot compare them in this way.

APPEARANCE

Generally, color is of less importance when selecting blankets than warmth and durability. Since the range of colors for any quality is almost always large enough to permit a choice that will harmonize with other furnishings, it is well to select first on quality, then on color.

Blankets may be plaid; or one color on both sides, either with or without contrasting borders across the ends; or two-tone reversible, that is, a plain color on one side and a contrasting color on the other. Some of the more luxurious reversibles have shaded borders. In recent years the trend has been toward solid-color blankets even in the inexpensive cotton ones.

Before deciding on the color, unfold and look at the entire blanket to make sure that it is an even tone all over. Some wools dye differently from others, and while this occasionally produces special color effects, it may result in undesirable shadings.

While you have the blanket unfolded, examine the ends to see that they are cut straight. If there are stripes or borders use them as guides. If the blanket is a plain color, hold it up to the light and see whether the end is cut parallel to the filling threads. Blankets that are cut crooked may be finished to appear straight but with use and washing will take on their true shape. If you should attempt to straighten such a blanket you would probably end with one too short for comfort.

Be sure also that contrasting borders, stripes, and plaids are of the same fiber and woven in the same way as the rest of the blanket. A difference in the kinds of fibers or yarns or in the weave may cause a blanket to shrink unevenly when washed and leave ripples and puckers that you cannot smooth out. Notice stripes and borders especially. They should look the same as the rest of the blanket. If they seem taut or full, then they were woven under a different tension from the body of the blanket, and this difference will be even more conspicuous after the blanket is washed.

SIZE

Length and width of a blanket can be determined with reasonable accuracy in the store. Generally these figures are stated on the label. However, the Bureau of Home Economics found that actual measurements tallied with the claims in only 3 of the 22 blankets studied. If the size is not stated, the blanket can be easily and quickly measured.

Blankets should be long enough to tuck in at the foot of the bed and to come up well over a person's shoulders, and also wide enough to hang down over the sides of the mattress. To estimate the length of blankets to buy, measure the length and thickness of the mattress, then add at least 6 inches for a tuck-in at the foot. For the width, measure the width of the mattress and add the depth of the two sides. This gives the minimum size. It is better to allow a few extra inches each way for shrinkage and for take-up by the body. Sometimes novelty-weave blankets, for instance those that resemble homespuns, are made shorter than the regular household sizes. They are intended for slumber throws, so that a tuck-in is unnecessary.

Both price and weight, of course, vary with size. When buying blankets on the bargain counter or at special sales, be sure to examine them to see that they are the same size as those selling at regular prices. A difference in price may be due to difference in size.

Blankets range from 54 to 80 inches wide and from 76 to 90 inches long. Some years ago each manufacturer made blankets according to his own set of measurements. This, of course, resulted in a great many different sizes. In 1924 a group of manufacturers under the sponsorship of the Division of Simplified Practice of the National Bureau of Standards decided to limit the blanket sizes to the widths and lengths shown in table 1.

Table 1.—*Sizes of blankets*

For single beds	For twin beds	For double beds
Inches	*Inches*	*Inches*
54 by 76	66 by 76	68 by 80
60 by 76	66 by 80	70 by 80
60 by 80	66 by 84	72 by 84
60 by 84	66 by 90	80 by 90

Now practically all qualities of blankets come in any of these sizes. However, the small sizes usually prove poor economy because every blanket shrinks some in laundering. During recent years when the price of raw wool was low, larger blankets appeared on the market until now the 80 by 90 inch size, sometimes called a luxury size, is found commonly. A blanket of these measurements is sufficiently large to tuck in well and to cover even a very large person.

The length and width given for blankets always refer to a single thickness. For example, if a pair of double blankets is woven in one continuous piece 72 inches wide and 168 inches long it will be labeled 72 by 84 inches. The same is true if a pair is cut in the middle, each bound separately and the two sold as a pair.

COMPARISON OF HOUSEHOLD BLANKETS

Many reasons for the consumer's difficulties in selecting blankets were brought out by a study made at the Bureau of Home Economics. The following comparison of blankets based on the analysis of 22 such blankets varying in price and fiber content shows how difficult it is to judge quality by appearance and the scanty information given on labels.

Among the all-wool blankets one was outstanding. It had a filling strength of 50 pounds (grab method) which, with but one exception, was twice that of any other in the same group. This blanket was very warm and also showed the most resistance when tested for wear, but it was the heaviest of all examined (15 ounces per square yard). At the other extreme was a relatively inexpensive all-wool blanket, light in weight (8.6 ounces per square yard), but its filling strength (18 pounds, grab method) was only fair and it was unsatisfactory in wear and warmth.

Among the 11 all-wool blankets analyzed was a blanket of medium price with filling strength (26 pounds, grab method) and weight (12 ounces per square yard) that lay about half-way between the highest and lowest for this group. It lost 30 percent in weight when tested for rubbing, whereas another lost 75 percent and one at the other extreme only 8 percent. When tested for air permeability, 94 cubic feet of air under a certain pressure passed through 1 square foot of this blanket per minute in contrast to the extremes of 173 and 69 cubic feet for the others. In heat transmission this blanket ranked sixth. While not unusually good in any of these properties, it may prove as satisfactory as some of those higher in filling strength, weight, or warmth, but low in other qualities.

One of the blankets in the all-wool group showed the effects of too much napping. It was soft, fluffy, warm, and of medium weight, but its filling strength was only 11 pounds (grab method) to the inch. That, together with the preponderance of short fibers found in the yarns, made it a very unsatisfactory purchase.

The wool-cotton blankets gave similar results. A mixed blanket containing 80 percent of wool proved to be stronger in the filling (60 pounds, grab method) than the best all-wool one. In warmth and resistance to wear it ranked next to the top for the wool-and-cotton-mixed blankets, but it was heavy (15 ounces to the square yard). The cotton-and-wool blanket most uniform in all respects, contained only 25 percent of wool. For warmth and resistance to wear it came about midway between the extremes, and the weight (12 ounces to the square yard) was satisfactory. The strength of the filling was sufficiently high (38 pounds, grab method) and was probably due the core yarns (fig. 1, *b*).

LABELS

It would be to the mutual advantage of both the manufacturer and the consumer if the labels attached to blankets gave definite information about their warmth and wearing qualities. For example, many manufacturers make several grades of all-wool and wool-mixed blankets, but the only difference the average homemaker can detect is that in price and possibly in thickness and feel. She has no way of knowing which is the best buy for the money. An ideal label for a blanket would state:

Length and width in inches.

Fiber content in percent.

Weight in number of ounces per square yard.

Tensile strength of the fabric, especially fillingwise, and whether determined by strip or grab method.

A measure of warmth, either heat transmission or air permeability or both.

In wool-mixed blankets, type of yarn construction; that is, whether the warp is all cotton and the filling all-wool, a core yarn, or a blended yarn.

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